

What is claimed is:

1. A thin film magnetic head comprising:
a thin film coil for generating a magnetic flux; and
a magnetic pole layer for emitting the magnetic flux generated by the thin film coil toward a recording medium which moves in a predetermined medium traveling direction and for magnetizing the recording medium in a direction orthogonal to the surface of the recording medium,

the magnetic pole layer having a magnetic pole end surface exposed in a recording-medium-facing surface which faces the recording medium and including a track width specifying part specifying a recording track width of the recording medium,

wherein when length in the direction orthogonal to the recording-medium-facing surface in the track width specifying part of the magnetic pole layer is set as D and width of a magnetic pole edge positioned on a medium outflow side in the medium traveling direction of the magnetic pole end surface is set as W , a dimensional ratio D/W lies within the range of $0 < D/W \leq 2.3$.

2. A thin film magnetic head according to claim 1, wherein the track width specifying part is made of an alloy containing iron (Fe) and cobalt (Co) and having a coercive force of less than $5.0 \times 10^3 / (4\pi)$ A/m, and

the dimensional ratio D/W lies within the range of $0 < D/W \leq 2.8$.

3. A thin film magnetic head according to claim 1, wherein the track width specifying part is made of an alloy containing iron and cobalt and having a coercive force of $10.0 \times 10^3 / (4\pi)$ A/m, and

the dimensional ratio D/W lies within the range of $0 < D/W \leq 2.3$.

4. A thin film magnetic head according to claim 2, wherein the width W of the magnetic pole edge is $0.3 \mu\text{m}$ or less.

5. A thin film magnetic head according to claim 3, wherein the width W of the magnetic pole edge is $0.3 \mu\text{m}$ or less.

6. A thin film magnetic head according to claim 4, wherein the magnetic pole layer further includes a wide part coupled to the track width specifying part and having a width larger than the width of the track width specifying part, and

when total length of the track width specifying part and the wide part in the magnetic pole layer is set as $L1$ and the width of the wide part is set as $L2$, a dimensional ratio $L1/L2$ lies within the range of $0.25 < L1/L2 < 1.0$.

7. A thin film magnetic head according to claim 5, wherein the magnetic pole layer further includes a wide part coupled to the track width specifying part and having a width larger than the width of the track width specifying part, and

when total length of the track width specifying part and the wide part in the magnetic pole layer is set as L1 and the width of the wide part is set as L2, a dimensional ratio $L1/L2$ lies within the range of $0.25 < L1/L2 < 1.0$.

8. A thin film magnetic head according to claim 6, wherein the magnetic pole layer has a stacked-layer structure in which a magnetic layer and a nonmagnetic layer are alternately stacked.

9. A thin film magnetic head according to claim 7, wherein the magnetic pole layer has a stacked-layer structure in which a magnetic layer and a nonmagnetic layer are alternately stacked.